

1910.

QUEENSLAND.

27

ANNUAL REPORT

OF

THE COMMISSIONER OF PUBLIC HEALTH

TO

30TH JUNE, 1910.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

BRISBANE:

BY AUTHORITY: ANTHONY JAMES CUMMING, GOVERNMENT PRINTER, WILLIAM STREET,

1910.

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ANNUAL REPORT OF THE COMMISSIONER OF PUBLIC HEALTH.

TO THE UNDER SECRETARY, HOME DEPARTMENT.

Office of the Commissioner of Public Health,
1st September, 1910.

SIR,—I have the honour to submit the following Report upon the operations of the Department under my control for the year ending 30th June, 1910, together with certain comments and detail bearing upon the Public Health of Queensland.

Details of principal Vital Statistics will be found in Appendix A, page 8.

I.—GENERAL WORKING.

1. STAFF AND CHANGES.

Dr. Ham resigned the Commissionership on 12th August, 1909, in order to take up the duties of Chairman of the Board of Public Health of Victoria.

Dr. Woolrabe acted as Commissioner from 13th August to 31st December, 1909.

I assumed duty on 1st January, 1910.

At the close of the year under review the staff under my control consisted of a health officer, a secretary, two clerks, a messenger, a chief inspector, four inspectors, a staff nurse, a disinfector (Metropolitan Area), a rat gang of ten men (Metropolitan Area), and seven rat destroyers stationed at Maryborough, Bundaberg, Gladstone, Rockhampton, Mackay, Townsville, and Cairns, respectively.

In April, 1910, the launch "Hygeia" was dispensed with on my recommendation, owing to her constant breakdowns and consequent expense. The services of the launchman were terminated from 31st March, 1910, effecting a further saving of £2 per week.

The duties of caretaker at Colmslie Isolation Hospital are provisionally performed under a part-time arrangement, the former caretaker rendering part services in lieu of rental.

By proclamation dated 1st April, 1910, the operation of Parts III. (Sanitary Provisions) and IV. (Dwellings) of "The Health Act of 1900" were extended throughout Queensland.

2. BACTERIOLOGICAL INSTITUTE.

A request made by a deputation from the British Medical Association that a fully-equipped laboratory, with a specially-qualified medical officer in charge, should be instituted under the Commissioner of Public Health, received Ministerial consideration. After endorsement by myself, the proposal was adopted, and necessary arrangements were made for the early transfer of the Bacteriological Institute building and a portion of its equipment and staff from the Department of Agriculture and Stock. Funds for re-equipment and the salary of a microbiologist were also provided. The Government Bacteriologist (Mr. Pound) takes over charge of the Government Stock Institute at Yeerongpilly.

3. SANITARY SURVEY AND INSPECTION.

Systematic sanitary survey of the principal centres of population has been undertaken, and will be pushed forward until all chief populated areas of the State have been covered. The results of inspection are recorded for each area or centre in such a way as to secure uniformity of observation and ready reference to any principal detail of local sanitary executive. By this means a large amount of precise information is being secured, for use in emergency, for enabling local sanitary progress to be accurately computed and assisted or stimulated where necessary, and for justifying orders for recovery of cost of inquiry and of measures of rectification where deliberate default or neglect occurs in the local performance of statutory duties.

This system also enables the Department to act as a bureau of information for Local Authorities who desire technical information as to the working of sanitary undertakings in Queensland.

The Areas visited by inspectors for this and other purposes are set forth in Appendix E, page 12.

A dated flag map showing all tours by officers is kept up on a twelve-monthly basis.

4. TRAINING OF SANITARY INSPECTORS.

By arrangement between the Royal Sanitary Institute Examining Board for Queensland and the Department of Public Instruction, the course of instruction for sanitary inspectors has been amplified and extended.

Weekly lectures are delivered at the Technical College, Brisbane, with practical field demonstrations at places of sanitary interest. Arrangements have been made for printing the lectures with a view to their use by country inspectors and others desirous of qualifying themselves in executive sanitation. It is hoped that other courses of technical sanitary instruction will be organised on similar lines in the near future, together with local arrangements for instruction and examination of provincial candidates for certificates.

5. OFFICE METHODS.

In view of the necessarily heavy clerical work and the small staff available for its performance, various labour-saving office methods have been designed and introduced with the skilled assistance of the Secretary, Mr. Mellish. These have done away with much redundant writing and copying, and have enabled the time of officers to be set free for other work, whilst securing easier reference for records and documents.

6. REPORTS, MEMORANDA, CIRCULARS, ETC.

The following Reports and Memoranda have, amongst others, been submitted:—

- 24th November, 1909.—Suggestions for dealing with the spread of typhoid fever outbreaks, and, further, the necessity for retaining the services of a medical officer for treatment of typhoid carriers.
- 17th January, 1910.—On Peel Island Lazaret.
- 1st March.—Proposing joint action with the Commonwealth in establishing depôts of vaccine lymph at Northern ports.
- 7th April.—Recommending the establishment of a Northern sub-office for the protection and sanitary betterment of Tropical Queensland.
- 23rd April.—On a proposal for large scale mosquito destruction with details of organisation required.
- 13th May.—On proposed site for female leper station at Myora.
- 13th May.—On medical inspection of schools, with detailed scheme for Queensland (to Department of Public Instruction).
- 14th June.—On proposed transfer of Bacteriological Institute to control of Commissioner of Public Health.

The following Circulars have been issued:—

- 1st September, 1909.—To Local Authorities, advising that cerebro-spinal meningitis and anterior poliomyelitis are infectious diseases within the meaning of the Health Act.
- 14th October, 1909.—To Local Authorities concerned, leaflet "Warning to Parents," containing suggestions for prevention of ankylostomiasis.
- 14th February, 1910.—To health officers, requesting declaration required under section 24.
- 15th February.—To Local Authorities, forwarding *Gazette* notice suspending section 111 (scales on bakers' carts).
- 23rd March.—To Local Authorities, forwarding Regulation Prohibiting Spitting on Footpaths, &c.
- 1st April.—To Local Authorities, forwarding notice of extension of Parts III. and IV. throughout the State.

13th June.—

- To registered nurses, information relating to enrolment on roster for emergency work.
- To merchants, Brisbane, requesting information as to cost of damage by rats.

The following printed matter has been designed for official use:—

Disinfection and Disinfectants (pamphlet for use by Local Authorities and public).

General Inquiry Form, Infectious Diseases.

Sanitary Survey Sheets—(1) Nightsoil Service; (2) Garbage Removal; (3) Water Supply; (4) Drainage; (5) Disinfecting Arrangements; (6) Rat Infestation and Destruction; (7) Local Sanitary Inspectors—with Index Docket.

Notice of Breach of Act or By-laws for notifying Local Authorities.

Rat Inquiry Card.

Officer's Weekly Diary Sheet.

Inquiry and Detail Cards for Epidemic Disease (Smallpox).

"Gentlemen Will Not Spit" Notices.

II.—FOOD INSPECTION AND ADULTERATION.

The tables given in Appendices H, J, and M, and the Report of the Government Analyst, will illustrate the work of the Department in enforcing food-purity, so far as its legal and financial circumstances have admitted.

Over 146 tons of foodstuffs were seized by the inspectors and destroyed as unfit for consumption; 35 prosecutions were undertaken, and 33 convictions obtained; totalling £199 5s. 2d. in fines and costs.

The remarks of the Government Analyst in respect of milk adulteration illustrate the urgent necessity for a Pure Foods Act framed and administered on modern lines, which will alone enable this form of roguery to be suppressed. The adulterating milk vendor is more than a mere swindler, for he defrauds the helpless infant and invalid of that very nourishment upon whose integrity and purity their lives may depend.

If a milkman has a round of 100 quarts a day average, retailed at 4d. per quart, and adulterates to the average of adulterated milk for the year under review (8·3 per cent. of water), he will, during the year, sell 757 gallons of water for £50 9s. 10d. He can thus well afford an occasional £5 fine. On the figures shown by analysis, the people of the Metropolitan Area of Brisbane appear to be paying some £2,500 a year for water retailed at 4d. per quart under the guise of milk. The fines and costs recorded against offenders during the year under review totalled £96 11s. 2d.

A significant detail in the Report of the Government Analyst is the statement that the only food samples received for analysis were from the inspectors of this Department.

During a portion of May and June I attended, with the Government Analyst, the Departmental Conference on Uniform Standards for Food and Drugs, held in Sydney.

III.—GEOGRAPHICAL AND EPIDEMIOLOGICAL RELATIONSHIPS.

The area of Queensland is 670,500 square miles, and the estimated population at the end of 1909, 578,548. Some 200,000 of these people live within the Tropic of Capricorn, and the greater proportion of the total population is within 100 miles from the coast. The coast line is about 2,000 miles, and seven principal towns (including Brisbane) lie along it. These contain approximately 210,000 people.

The geographical relations of Tropical Queensland with Eastern ports and countries are of much significance from the epidemiological standpoint. The Aru Islands are some 600 miles from Thursday Island; Cerain, in the Spice Islands, 900 miles; Celebes, 1,500 miles; Borneo, 1,800 miles; Manila, 2,000 miles; Timor, 1,000 miles; and Batavia (Java), 2,100 miles. All these places are infected with smallpox, or have been recently so infected. Thursday Island is 540 miles from Cairns, 700 miles from Townsville, 1,098 miles from Keppel Bay (Rockhampton), and 1,448 miles from Brisbane.

The average period elapsing between infection with smallpox and the earliest appearance of symptoms is twelve days.

A 12-knot steamer (allowing for ordinary stoppages and detentions) could hence land an infected person from the Aru Islands in Cairns 7 days, in Townsville 6 days, in Rockhampton 4 days, and in Brisbane $2\frac{1}{2}$ days before the most skilful quarantine officer could detect any sign of danger. Similarly, an infected person from Manila could land in Cairns or Townsville 2 or more days before his illness began.

It is not feasible or desirable to hamper traffic and commerce unnecessarily by quarantining vessels or passengers under these conditions. Surveillance is possible, but cannot be wholly depended upon. The existing local sanitary organisations in Tropical Queensland are not at all adequate to meet emergencies arising from such dangerous and panic-producing epidemic disease as smallpox or cholera. Extreme promptness and accuracy of executive is essential for dealing with such emergencies. This obviously cannot be directed from 700 miles away in all the minute details requiring close attention on the spot, particularly when the principal executive officers would, under existing conditions, be medical men engaged in practice.

In addition to smallpox, undoubted risk exists from cholera, plague, and malignant forms of malaria, all of which are within easy striking distance of our Northern centres.

The presence of the *Stegomyia calopus* as a common domestic mosquito in Southern Queensland renders it possible for yellow fever to cause serious mischief if it should be allowed to reach our shores by an infected mosquito or otherwise, when the Panama Canal is opened.

IV.—STATUTORY INFECTIOUS DISEASES.

One thousand six hundred and fifteen statutory notifications of infectious disease were received, and 100 notifications of deaths from phthisis (see Appendix L, page 16).

1. NOTIFICATION PROVISIONS.

The provisions of the Act which exempt hospitals from notifying infectious disease cases, and which require notification to be made in the first place only to Local Authorities, prevent the Department from obtaining that complete and early information concerning such diseases which is essential for efficient action. It is advisable that these defects should be remedied by amendment of section 134 to secure duplicate notification in all cases. Particularly in the case of phthisis there is reason to believe that a considerable proportion of cases are not notified at present.

2. ANKYLOSTOMIASIS.

Only a single case of ankylostomiasis was notified, although it is matter of common knowledge that this disease is relatively prevalent in several centres. In a certain Northern town one particular street has been unofficially christened "Ankylostoma Alley"—an alliterative title derived from the large number of cases of this disease amongst the children living in it.

3. PHthisis.

The death roll from phthisis affords a lesson in the economic aspects of public health. By the Australian age-distribution of cases of this disease for 1909, 68 per cent. (232) of the 341 deaths for 1909 may be taken as having occurred in persons between 15 and 50. These people are at the most productive and useful period of life—an age which yields the highest proportion of breadwinners, of producers and supporters of families, and of individual prosperity and happiness.

Their disablement and loss at these ages is hence peculiarly productive of misery and poverty.

An average fatal case may, on a very low estimate, be taken as representing at least £25 of direct expenditure, whether this be personal outlay or cost of sanatorium or hospital treatment at the public expense.

The deaths for 1909 hence represent over £8,000 of public or private expenditure on account of this one preventable disease. The remedy lies less in the direction of extensive curative provision by sanatoria, than in that of protective segregation of advanced indigent cases, the systematic dissemination of information regarding simple methods of preventing infection from sufferers, the suppression of the filthy practice of spitting about, and the destruction of infection by appropriate means after the death or removal of sufferers.

The basic facts of the practicable methods of prevention, and the manner of spread, of the principal preventable diseases would, if systematically taught in schools, as is done in many places elsewhere, do a great deal towards limiting in the near future their present disastrous effects as poverty producers.

Cases of phthisis reported from the Metropolitan Area are visited by the Staff Nurse, and advice is given both verbally and in printed form.

Disinfection has continued, as in the case of other infectious diseases, to be carried out from this Department on behalf of 17 of the Local Authorities in the Metropolitan Area, the cost being recovered from them.

A Regulation forbidding Spitting on Footpaths or in public places was made on 16th March. The Commissioner of Police instructed his officers to secure its enforcement in Brisbane, and five offenders were prosecuted and convicted. The effect has been salutary.

4. TYPHOID FEVER.

This is another disease of particularly uneconomic effect, both from its age-incidence and the long period of disablement which it causes.

Assuming the average cost at £8 per case (again a very low estimate), the bill for typhoid for 1909-10 amounts to at least £6,000. Owing to the non-return of hospital cases, it is probably much more than this.

The proven existence of typhoid "carriers" has put the epidemiology of this disease in a new light. The influence of flies in transmitting the infection has also been demonstrated beyond all doubt. Both features afford conclusive arguments in favour of attention to local sanitary executive and the maintenance of a high standard of efficiency in all dealings with excretal matter.

5. MALARIA.

An outbreak of severe sub-tertian malaria occurred at Kidston (Oaks Rush), and necessitated the despatch of Dr. Baxter Tyrie (Government Health Officer) from Cairns. His investigation showed that the disease had probably been introduced by infected European miners from New Guinea. Amongst a population of approximately 400, 120 persons were affected, and at least 25 died. The measures taken by Dr. Tyrie were successful in stopping the outbreak.

The establishment of severe forms of malaria in Tropical Queensland require to be carefully guarded against, as the economic results of this disease are very serious.

V.—MOSQUITO DESTRUCTION.

A request submitted by a deputation from the British Medical Association that systematic operations should be undertaken against mosquitoes in view of the present prevalence of filariasis, and future risks from yellow fever, was considered.

The principal conclusions arrived at were:—(1) That effective operations could be undertaken against the *Culex fatigans*, and *Stegomyia calopus*, both of which are very common domestic mosquitoes in Brisbane, and which, when infected, convey filariæ and yellow fever, respectively, to man; (2) That such operations would require, as a necessary preliminary, statutory powers for entry, action, and enforcement of suitable regulations, such powers not being granted under "The Health Act of 1900"; (3) That rain-water tanks and other domestic collections of unprotected water afford the principal breeding places for these insects; (4) That the work, if undertaken, should, owing to the accuracy and precision of detail needed for success, be controlled from this Department; (5) That a large organisation would be required at the outset, to deal with the Metropolitan Area of Brisbane, but that operations in a suitable selected area would yield useful results as a basis for subsequent methods and action. A report was submitted.

During this inquiry interesting information regarding mosquito (larvæ) destroying fish commonly found in streams in Southern Queensland was obtained from Mr. Ogilby, Secretary of the Amateur Fishermen's Association, and from Dr. T. L. Bancroft.

Specimens were obtained and are now under observation. The results show that one or more species of these local fish are at least as effective and practically useful for mosquito destruction as are the much-advertised "millions" of Barbados.

VI.—PLAGUE AND RAT OPERATIONS.

No case of plague has occurred in Queensland during the year under review. This is the first year since 1900 in which complete freedom from this fell disease can be chronicled. This happy result is certainly due to the wise and resolutely followed policy of my predecessor, Dr. Ham, in aiming at the infected rat as the origin and agency of human plague, and to the fine organisation developed by his efforts for the early detection and prompt suppression of rat plague in the principal centres open to infection.

This freedom can only be maintained by unremitting persistence in the measures which have secured it.

The extent of rat operations in the State and in the Metropolitan Area will be evident from Appendices F and G. 58,629 rats and mice were destroyed during the year under review, and 35,930 carcasses submitted for examination; 5 rats were found to be plague-infected.

With a view to ascertaining something of the actual monetary damage wrought by rats, a circular letter and schedule of questions were drawn up and distributed to leading business firms in Brisbane. The Brisbane Chamber of Commerce kindly lent its weighty authority and assistance to the inquiry. The results are not yet complete, but a large number of instructive details have been recorded. To mention a few of the instances given, one firm lost from £50 to £100 per annum from rats until the Departmental rat gang came to their aid; another lost £35 in goods damaged by rats during a move; another suffered £10 worth of damage from these animals in a single night; and a fourth found the expenditure of £500 in rat-exclusion measures a profitable investment.

The returns of rats destroyed in the Metropolitan Area have kept up so steadily that it was deemed advisable to set on foot a systematic inquiry as to the conditions of harbourage, food supply, &c., which evidently enable the rat population to rapidly repair losses from suppressive action. A district has been allotted to each inspector, and all otherwise unoccupied official time is required to be spent in a systematic house-to-house survey to this end. Cards are used for recording results (mainly by a simple mark system used in place of written description, in order to expedite the work), and any sanitary defects noted are brought under the attention of the Local Authority.

The old defective sewers, of which so many exist in the Metropolitan Area, afford protection and safe harbourage for an immense rat-population, and greatly increase the difficulties of the work. To this is added the neglect shown by many private individuals concerning the storage and disposal of edible garbage on their dwelling premises.

Permanent control of the rat question cannot be expected until legislation is provided to enable the animals and their haunts to be faithfully and effectually dealt with, whether on private or municipal territory. Until this is done, the recrudescence or reintroduction of plague, with all its destructive and uneconomic but wholly unavoidable consequences, will continue to hang over our heads. The work of the rat staff affords the only real measure of safety at present.

VII.—LEPROSY.

“*The Health Act of 1900*” does not apply to this disease, which is controlled by a special Act (“*The Leprosy Act of 1892*”) administered by the Home Secretary. Disinfection of two State schools and two dwellings in connection with leprosy has been carried out by officers of this Department, by arrangement.

A proposal to transfer the female lepers to a new station at Myora, on Stradbroke Island, was reported on and condemned.

I am indebted to Dr. Linford Row, Medical Superintendent of Peel Island Lazaret, for the following particulars:—

84 cases were under segregation at the lazaret during the year.

6 new admissions were made, and six deaths occurred.

11 of the cases were classified as anæsthetic leprosy, 45 as tuberculo-anæsthetic, and 28 as nodular leprosy.

The races and nationalities comprised 14 Queenslanders of European descent, 1 from New South Wales, 20 aborigines and half-castes, 3 English, 2 Europeans other than English, 39 kanakas, 3 Chinese, 1 Cingalese, and 1 Japanese.

Dr. Row considers that the principal endemic centres of leprosy in Queensland are Bundaberg, Cairns, Mackay, and the Johnstone River. Bundaberg he regards as the chief endemic centre, a large proportion of all cases admitted having at one time or other lived at Bundaberg. He is also inclined to believe that leprosy is very prevalent amongst the aborigines of Cape York Peninsula.

Nastin treatment has proved a failure at Peel Island. The Guiaicol treatment introduced by Dr. Row is stated to continue to give beneficial results.

VIII.—MARITIME QUARANTINE.

This is administered under “*The Quarantine Act, 1908*,” of the Commonwealth, the Commissioner acting as Federal Chief Quarantine Officer (General) in respect of ships, goods, and human beings. The transfer has thrown much extra work on the staff; but the arrangement has worked smoothly and efficiently from the administrative standpoint.

No quarantine has been ordered during the year. Several released passengers from the R.M.S. “*Otway*” were kept under surveillance in April, the infected vessel remaining at Sydney.

Arrangements have been made to establish dépôts of vaccine lymph in cold storage at the principal coastal centres, on a co-operative basis between State and Commonwealth, for use in any smallpox emergency.

A roster of trained nurses is also being prepared for use in emergency, vaccination being a condition of enrolment.

The inspectors, staff nurse, and rat gang have also been protected by vaccination.

It will be clearly understood from what has gone before that no system of seaboard quarantine, however thoroughly it may be planned and operated, can do away with the need for effective internal sanitary organisation.

IX.—ECONOMIC AND GENERAL CONSIDERATIONS.

The severely utilitarian and economic basis of Public Health administration is apt to be overlooked by those who regard the production of actual revenue as the only criterion of usefulness.

Its underlying purpose is the prevention and suppression of certain communicable diseases and certain conditions inimical to physical well-being. Each case of these diseases involves an avoidable and unnecessary expense, and a more or less serious risk to life. In the aggregate they represent a heavy and unnecessary annual outlay. The capital of the average worker is represented by his physical health and strength, and industrial development largely depends on the human material available. Large epidemic disasters involve the temporary crippling or stoppage of commercial progress in the community affected, and not infrequently result in the permanent diversion of trade and traffic.

Modern knowledge enables these risks to be guarded against, and their evil effects to be cut short or abolished if the means are provided. Against the great majority we can apply precise measures of prevention and suppression. No longer do we tear up drains as a first measure towards discovering the cause of diphtheria or typhoid fever, or seek to explain consumption or malaria by bland generalities about "climate."

Disease is not to be explained or legislated away; it has no respect for geographical or statutory boundaries, and it usually gives no warning of its onslaught. Its successful prevention and control is a highly technical process which carries responsibilities of life and death.

"The Health Act of 1900" is not a legislative thunderbolt lying ready for the instant abolition, on occasion, of disease and insanitation. Its protective value depends in practice wholly upon the efficiency and adequacy of the means provided for its operation. These require money and time for development and organisation, and cannot be hastily improvised in emergency.

The Act contains no revenue-producing powers, save those accruing from prosecutions and recovery under statutory orders. Both sources are administratively desirable to avoid, if possible; and the objective of administration is wholly in the direction of lessening the need for them.

I have the honour to remain,

Sir,

Your obedient servant,

J. S. C. ELKINGTON,

Commissioner of Public Health.

APPENDIX A.

SUMMARY OF PRINCIPAL VITAL STATISTICS OF QUEENSLAND FOR DECADE 1900-1909.

(Furnished by Government Statistician.)

—	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
1. Estimated Mean Population ..	490,325	505,695	513,612	512,690	519,178	525,728	532,783	541,204	555,171	571,044
2. Number of Births ..	14,801	14,303	14,216	12,621	14,082	13,626	14,019	14,542	14,828	15,554
Rate per 1,000 Mean Population ..	30.19	28.28	27.68	24.62	27.12	25.92	26.31	26.87	26.71	27.24
3. Deaths under 1 Year ..	1,456	1,458	1,424	1,513	1,072	1,029	1,047	1,122	1,043	1,119
Rate per 1,000 Born ..	98.4	101.9	100.2	119.9	76.1	75.5	74.7	77.2	70.3	71.9
4. Deaths all Ages ..	5,747	6,007	6,204	6,346	5,250	5,503	5,095	5,599	5,680	5,530
Rate per 1,000 Mean Population ..	11.72	11.88	12.08	12.38	10.11	10.47	9.56	10.35	10.23	9.68
5. Deaths in Public Institutions ..	304	388	419	491	399	474	429	562	513	584
6. Number of Marriages ..	3,371	3,341	3,243	2,933	3,078	3,173	3,588	4,105	4,009	4,512
Rate per 1,000 of Mean Population	6.88	6.61	6.31	5.72	5.93	6.04	6.73	7.58	7.22	7.95

APPENDIX B.

REPORT OF HEALTH OFFICER.

Department of Public Health, Queensland,

Brisbane, 11th August, 1910.

SIR,—I have the honour to submit my Report for the year ended 30th June, 1910.

QUARANTINE.

Owing to the pressure of work consequent on my appointment as Acting Commissioner of Public Health on 13th August, I found it impossible to carry out the duties of quarantine officer as well, and Dr. Page was appointed Port Quarantine Officer. My time for the next three or four months was largely occupied in making arrangements necessitated by the passage of quarantine under the control of the Commonwealth.

It gives me pleasure to refer to the invaluable assistance rendered by the Secretary, Mr. Mellish, during the period of high pressure at which the Department worked during this inauguration.

As it was impossible to deal with all the questions arising without continually working long after canonical hours, the ordinary work of the Department had to be neglected to some extent.

CAMBOOYA.

On 26th December I was able to pay a visit to Cambooya, accompanied by Inspector Wilson, in connection with some proposed improvements in street drainage and the selection of a sanitary dépôt.

PALMWOODS AND NAMBOUR.

On 15th February, accompanied by Inspector Lewis, I visited Palmwoods in connection with some cases of ankylostomiasis, and later the township of Nambour in connection with a drainage scheme, contamination of wells, and sanitation generally. Reports on both places have been submitted to you.

SOUTHPORT.

On 19th February I was instructed by the Minister to visit Southport and report on two cases of suspected leprosy there.

TOOWOOMBA AND ROSEWOOD.

From 7th to 11th March, accompanied by Inspector Dudley, I visited Toowoomba to inquire into the circumstances of an outbreak of typhoid, when the details of the sanitation of the town were discussed with the Mayor and Health Committee. On my return I visited Rosewood, and conferred with the Local Authority *re* a proposed scheme of drainage. Reports on both places have been submitted to you.

NORTHERN TOUR.

On 31st March, accompanied by Inspector Lewis, I made a tour of several Northern towns.

An inquiry was made at Rockhampton into the circumstances of an outbreak of typhoid at Meteor Park Orphanage, as well as a careful inspection of conditions of sanitation and rat-infestation in the town and outlying places.

At Bundaberg similar work was done, as well as an investigation of the proposed conversion of the town creek into a formed sewer. Gladstone, Maryborough, and Marmor were also visited, and a site for a sanitary paddock searched for at the latter place.

The attitude towards sanitation of the Councils of some of these places—those of Bundaberg being a notable exception—was markedly Laodicean. Generally, the residents also were careless as to the state of their premises.

METROPOLITAN AREA.

In spite of the pressure of office work in the latter part of 1909, considerable reforms were accomplished in the case of some old-standing insanitary conditions, and an active campaign carried on against the selling of impure milk and food, and short-weight bread. After consultation with the Secretary of the Master Bakers' Association, I agreed not to enforce that part of the Health Act requiring bakers' carts to carry scales, owing to the expense of accurate instruments.

A systematic investigation into the methods of making and conditions of storage and sale of ice cream has been begun, and a good deal of interesting material collected. The investigation is incomplete, but so far the facts collected tend to show that bacterial contamination occurs rather before the milk reaches the maker than afterwards. At the same time it was plain there was room for much improvement in methods and surroundings. The use of preservatives was not common.

With a view to testing the efficacy of various poisons, I conducted a series of experiments on rats, the details of which have been submitted to you. It appears that the phosphorus poison made by the Department was much more active and appetising than that prepared from Barium carbonate or the *B. Danysz*—in fact, the strain of the latter was shown to be not only no longer lethal, but to be so attenuated as no longer to produce the characteristic lesion which had been a useful guide to the movements of rats in the past. Its use was, therefore, discontinued. Powdered sennills was also found useless. Experiments were also made on the lethal power of burning chillies and burning cayenne pepper on rats. It has been asserted that fumes from these are fatal to rodents, do not taint cargo, and are quickly dissipated, so lessening delay in entering holds.

The experiments showed that, though it was possible to kill in laboratory conditions, the expense for materials would be prohibitive.

Since the beginning of the year the sanitation of the Metropolitan Area has been kept under strict observation. Details will appear in other reports, but the increasing carelessness of occupiers since the quiescence of plague may be noticed, as also the lack of foresight shown by architects and builders in protecting buildings from rodents.

Mr. J. Quinn, the foreman of the rat-gang, having received well-deserved promotion, his place has been taken by Mr. Casey.

I may perhaps be allowed to express my belief that the long immunity of Brisbane from plague is largely due to the faithful but unrecorded labours of the departmental rat-gang.

PLAQUE.

But two suspect cases were reported, one of which, as far as its clinical aspect, was very suspicious. However, I was unable to obtain any bacteriological evidence.

It is of interest to note the absence of a series of cases, my ignorance of the etiology of which, I use to mark with the term "Febris Bubonica," some of which have always been seen when cases of true Pestis occurred.

Tables of rats killed and examined are attached.

ANKYLOSTOMIASIS.

This was made a notifiable disease in 25th September, 1909. Leaflets of "Warning to Parents," to be distributed in infected districts, were drawn up with the assistance of Drs. Turner and Salter, to whom their usefulness is due, though for the pathology I am alone responsible.

I have, &c.,

F. W. WOOLRABE, Health Officer.

The Commissioner of Public Health, Brisbane.

APPENDIX C.
REPORT OF THE GOVERNMENT ANALYST.

Government Chemical Laboratory,
Brisbane, 16th August, 1910.

SIR,—I have the honour, in accordance with section 31 of "*The Health Act of 1900*," to submit to you the following report of the work done in the Government Chemical Laboratory for the Health Department during the year 1909-10:—

The number of samples received from your Department during the year was 559, involving 4,553 determinations. Although less than the amount done during the previous year, the present year stands next to last year, which was a record. There were 198 more samples analysed during the year 1908-9 than during last year.

The number of fresh-milk samples tested during the year was 154; 78 of these were legal samples taken by the inspectors of the Health Department under the provisions of "*The Health Act of 1900*"; 19 of these samples came below the minimum standard of 8.5 solids not fat; and in 15 cases prosecutions were instituted, resulting in a total of fines and costs of £96 being recovered.

The proportions of added water present varied from 2 per cent. to 32 per cent., with an average of 8.3 per cent.

It is satisfactory to note that in every case where the legal minimum standard indicated added water the freezing-point method confirmed that result, in nearly every case showing, as would be expected with such a low legal standard, that more water had been added than is disclosed by a calculation with the legal minimum as a basis.

Of 18 samples of condensed milk tested, 10 were up to standard, 6 contained from 9.5 to 9.9 per cent. of butter fat, 1 contained 9.2 per cent. of butter fat, and 1 only 8.8 per cent. of butter fat; 5 of the samples below standard for fat were from the same factory, and they also contained traces of boric acid.

This is an improvement on the previous year's results, but is still far from satisfactory. It means that the value of water sold as milk is still at least twelve times greater than the fines and costs imposed, and that those milkmen who are dishonest can still well afford to take the risk of being caught and fined.

The forwarding by the Customs Department, on your behalf, of samples of every shipment of cream of tartar still keeps up the very high quality of that article.

Of 195 samples taken, all were passed but 6. Of these, 4 contained between 94 and 95 per cent. of hydrogen potassium tartrate; and only 2 samples, representing a trial shipment of 1 keg, contained less than 94 per cent. This keg contained 82 per cent. cream of tartar. These were the best results yet obtained of this article of food.

Seven samples of gin, 11 samples of rum, 29 samples of whisky, 13 samples of brandy, 19 samples of wine, and 2 samples of beer were all found fit for human consumption.

Of 36 samples of beverages and cordials tested, 15 samples were passed as fit for human consumption; 8 samples contained salicylic acid; 12 samples contained from 6.4 to 10.1 grains of salicylic acid per pint with saccharine also present; 1 sample contained 9.7 grains of salicylic acid and 3.3 grains of saccharine per pint.

Of 14 samples of vinegar tested, 11 were solutions of acetic acid and water coloured with caramel, and 3 were sugar-and-malt vinegars.

Four samples of crayfish were submitted; and of these 1 sample was passed as sound, but 3 were condemned; and 1 sample of tinned sardines was also condemned as unfit for human consumption.

Of 7 samples of tinned peas, 5 were passed. One contained copper at the rate of 2.4 grains of sulphate of copper per lb. One tin was blown, and contained 0.5 grains of tin per pint.

The following miscellaneous samples were found fit for human consumption:—Cocoa, 2; confectionery, 1; meal, 1; jam, 1; potted meats, 2; sauce, 1; grape juice, 1.

Thirteen samples of water were reported upon as to their potability; 4 samples were reported as showing no signs of sewage contamination—the remainder were contaminated with organic matter either of vegetable or animal origin; 3 samples of effluent from septic-tank systems were found to be only slightly oxidised sewage.

One sample of salad oil was found to be a mixture of olive oil with other oils.

A sample of salt—which claimed to have a high digestive action on account of containing the digestive ferment, papain, from the papaw apple—showed absolutely no digestive action on albumen. It was essentially a mixture of pure salt with a little maize starch.

Seven samples of sulphur for disinfection purposes were found to be commercially pure and free from arsenic.

Three samples of formalin for disinfecting purposes contained respectively 36.3, 37, and 35.8 per cent. of formic aldehyde.

One sample of meat preservative consisted of sodium sulphite in powder form; and another sample was a solution of sodium sulphite and cane sugar in water.

A sample of artificial fertiliser, the escape of which from broken bags had caused acute symptoms of poisoning among the men handling it, was found to be calcium cyanamide, the new artificial nitrogenous manure.

A sample of self-plating liquor consisted of silver chloride dissolved in a 4.5 per cent. solution of commercial cyanide. Although less than half a teaspoonful of this liquor contained a fatal dose of cyanide, no poison label or warning of any kind as to the dangerous nature of the contents was placed upon the bottle.

It will be seen from the above record that, apart from the milk, the food supply as indicated by the samples taken by the inspectors is now in a fairly healthy condition. It is very unfortunate that the milk supply, on which depends to a very large extent our infant mortality, should be in such a very unhealthy condition. The purity of the milk supply is of very much greater importance from a health point of view than the purity of any other article of food, and yet it is the most adulterated and most contaminated food material in use at the present time.

No samples of food were received under the provisions of the Health Act, except from your Departmental inspectors.

I have, &c.,
J. BROWNLIE HENDERSON,
Government Analyst.

The Commissioner of Public Health, Brisbane.

APPENDIX D.

REPORT OF THE GOVERNMENT BACTERIOLOGIST.

Bacteriological Institute,

Brisbane, 17th August, 1910.

SIR,—I have the honour to submit the following Report on the work performed at this Institute, in connection with the Department of Public Health, during the year ended 30th June last:—

PLAQUE (HUMAN).

During the past year only eight (8) specimens of suspected plague material were examined, comprising lymph, sputum, and viscera; but all proved negative, no plague bacilli being detected. In each case the result of the microscopic examination was confirmed subsequently by the culture and guinea-pig tests.

PLAQUE (RODENT).

22,773 rats and 3,333 mice were submitted from Brisbane, Bundaberg, and Ipswich, or about 3,000 more than the preceding year. None were found to be infected. This is the first year, since the appearance of plague in Brisbane in 1900, that no infected rats were discovered.

From the health authorities at Mackay, smears of spleen-blood from 1,358 rats were received, and, on being stained and examined microscopically, five (5) were found to contain typical plague bacilli. These occurred during July, August, and September, 1909.

TUBERCULOSIS.

Specimens of sputa to the number of 297 were submitted; and in 103 of these tubercle bacilli were found. In addition, 2 specimens of pleuritic fluid, 3 of urine, one (1) of cow's milk, one (1) of pus, and one (1) of faeces were examined; but all gave negative results. In the latter specimens, it is customary, in addition to the microscopic examination, to, in each case, inoculate a guinea-pig, which is, as a rule, killed in six weeks or so from the date of inoculation and examined *post-mortem* for any indications of the disease.

LEPROSY.

Specimens of serum from 13 cases (suspected) were examined; and in 9 of these the bacilli were detected.

TYPHOID.

Specimens of blood from 266 suspected cases were examined by Widal's method; and in 84 of these positive reactions were obtained.

Thirteen samples of water from various sources were examined; but in only one could a positive result be obtained.

In 2 out of 23 specimens of urine, the *B. typhosus* was demonstrated; while, in one (1) specimen of soil from a sink, 4 of faeces, 2 of pus, and one (1) of cow's milk, negative results were obtained.

PATHOLOGICAL TISSUES.

This branch of the work continues to claim a large amount of attention, 141 specimens from suspected malignant tissues having been sectioned, stained, and microscopically examined. The microscopic examination of the prepared sections, as in the past, is conducted by Dr. Wilton Love, the Honorary Pathologist.

In addition to the above, animal tissues to the number of 43 were submitted and sectioned.

MISCELLANEOUS SPECIMENS.

A large number of specimens were submitted to be examined for the following:—Pneumonia, gonorrhœa, cerebro-spinal meningitis, septicæmia, filaria, malaria, anaemia, ankylostomiasis, hydatid disease, and syphilis.

Other specimens included foods (fish, ham, beef, and jam), cow's milk (for quantitative bacterial analyses), bread, ice cream, custard, water (quantitative and qualitative bacterial analyses), condensed milk, &c.

Twenty-seven specimens of urine were submitted for general examination purposes.

VACCINES.

The preparation of autogenous vaccines was undertaken at the commencement of the year under review; and 20 were prepared and supplied to members of the medical profession and the Hospital for Sick Children. The results, as far as can be ascertained, have been most gratifying.

CONCLUSION.

In conclusion, I wish to state that I am greatly indebted to Mr. Beardmore (the Assistant Government Bacteriologist), Mr. Kelly (clerk), and the other members of the staff for the valuable aid they have at all times rendered.

I have, &c.,

C. J. POUND, Government Bacteriologist.

The Commissioner of Public Health, Brisbane.

APPENDIX E.

VISITS MADE BY INSPECTING STAFF.

Date.	Place.	Inspector.	Purpose of Visit.
3 May, 1910 ...	Allora ...	A. J. Lewis ...	Sanitary survey.
3 May, 1910 ...	Allora ...	S. Dudley ...	Sanitary survey.
22 July, 1909 ...	Boonah ...	A. J. Lewis ...	Bread weighing.
22 July, 1909 ...	Boonah ...	F. Daniel ...	Laying information <i>re</i> bread prosecutions.
2 April, 1909 ...	Beenleigh ...	A. J. Lewis ...	Bread weighing.
26 August, 1909 ...	Beenleigh ...	F. Daniel ...	Laying information <i>re</i> bread prosecutions.
30 October, 1909 ...	Blackall ...	A. J. Lewis ...	Foods, liquor, sanitary survey.
30 October, 1909 ...	Blackall ...	W. G. Wilson ...	Food inspection.
27 August, 1909 ...	Beaudesert ...	A. J. Lewis ...	Inspecting liquors.
27 August, 1909 ...	Beaudesert ...	F. Daniel ...	Bakers, hotels, and sanitary survey.
23 October, 1909 ...	Barcaldine ...	A. J. Lewis ...	Inspection foods and liquors and sanitary survey and bread weighing.
23 October, 1909 ...	Barcaldine ...	W. G. Wilson ...	Sanitary survey and food inspection.
16 November, 1909	Bundaberg ...	A. J. Lewis ...	Bakers, stores, sanitary survey and prosecutions.
16 December, 1909	Bundaberg ...	F. Daniel ...	Bakers, stores, sanitary survey and prosecutions.
16 November, 1909	Bundaberg ...	W. G. Wilson ...	Bakers, stores, sanitary survey and prosecutions.
11 April, 1910 ...	Bundaberg ...	A. J. Lewis ...	Sanitary survey.
22 January, 1910 ...	Blacksnake ...	A. J. Lewis ...	Liquors.
22 January, 1910 ...	Blacksnake ...	F. Daniel ...	Liquors.
4 May, 1910 ...	Beenleigh ...	A. J. Lewis ...	Sanitary survey.
9 April, 1910 ...	Blackall ...	W. G. Wilson ...	Sanitary survey.
7 January, 1910 ...	Cleveland ...	A. J. Lewis ...	Bread weighing.
7 January, 1910 ...	Cleveland ...	F. Daniel ...	Bread prosecutions.
4 May, 1910 ...	Clifton ...	S. Dudley ...	Sanitary survey.
19 March, 1910 ...	Clonecurry ...	W. G. Wilson ...	General sanitary survey.
14 April, 1910 ...	Clermont ...	W. G. Wilson ...	General sanitary survey.
27 December, 1909	Cambooya ...	W. G. Wilson ...	General sanitary inspection.
15 February, 1910	Dalby ...	J. Simpson (Chief)...	With C. P. H., general sanitary inspection.
6 November, 1909	Emerald ...	A. J. Lewis ...	Foods, bakers, sanitary survey.
16 November, 1909	Emerald ...	W. G. Wilson ...	Food inspection.
18 April, 1910 ...	Emerald ...	W. G. Wilson ...	Sanitary survey.
22 July, 1909 ...	Engelsburg ...	A. J. Lewis ...	Stores, bakers.
22 July, 1909 ...	Engelsburg ...	F. Daniel ...	Stores, liquors inspected.
14 January, 1910 ...	Fairymead ...	A. J. Lewis ...	Sanitary survey.
20 December, 1909	Gympie ...	A. J. Lewis ...	Bakers and milkmen.
20 December, 1909	Gympie ...	F. Daniel ...	Laying information <i>re</i> bakers and milkmen.
20 April, 1910 ...	Gympie ...	A. J. Lewis ...	Sanitary survey.
8 April, 1910 ...	Gladstone ...	A. J. Lewis ...	Sanitary survey.
17 September, 1909	Goondiwindi ...	S. Dudley ...	Sanitary survey.
2 November, 1909	Goodna ...	F. Daniel ...	Inspection sanitary dépôt.
1 December, 1909	Goondiwindi ...	J. Simpson (Chief)...	General inspection.
1 July, 1909 ...	Harrisville ...	F. Daniel ...	Weighing bread.
1 July, 1909 ...	Harrisville ...	W. G. Wilson ...	Weighing bread.
6 July, 1910 ...	Homebush ...	W. G. Wilson ...	<i>Re</i> typhoid outbreak.
25 March, 1910 ...	Hughenden ...	W. G. Wilson ...	Sanitary survey.
15 October, 1909 ...	Ilfracombe ...	A. J. Lewis ...	Sanitary survey and foods.
15 October, 1909 ...	Ilfracombe ...	W. G. Wilson ...	Food inspection.
17 September, 1909	Ipswich ...	S. Dudley ...	Food inspection.
17 September, 1909	Ipswich ...	W. G. Wilson ...	Food inspection.
21 March, 1910 ...	Ipswich ...	S. Dudley ...	Sanitary survey.
7 May, 1910 ...	Ipswich ...	S. Dudley ...	Sanitary reserve inspection.
20 April, 1910 ...	Inglewood ...	S. Dudley ...	Sanitary survey.
20 October, 1909 ...	Jericho ...	A. J. Lewis ...	Sanitary survey and foods.
20 October, 1909 ...	Jericho ...	W. G. Wilson ...	Food inspection.
12 March, 1910 ...	Jondaryan ...	S. Dudley ...	Sanitary survey.
18 November, 1909	Killarney ...	J. Simpson (Chief)...	Drainage, nuisance, and general inspection.
2 May, 1910 ...	Killarney ...	S. Dudley ...	Sanitary survey.
22 January, 1910 ...	Kilkivan Junction ...	F. Daniel ...	Liquors.
13 October, 1909 ...	Longreach ...	A. J. Lewis ...	Food inspection.
13 October, 1909 ...	Longreach ...	W. G. Wilson ...	Food inspection.
5 April, 1910 ...	Longreach ...	W. G. Wilson ...	Sanitary survey.
27 August, 1909 ...	Loganholme ...	A. J. Lewis ...	<i>Re</i> bread and liquors.
26 August, 1909 ...	Loganholme ...	F. Daniel ...	<i>Re</i> bakers.

VISITS MADE BY INSPECTING STAFF—*continued.*

Date.	Place.	Inspector.	Purpose of Visit.
23 March, 1910 ...	Lowood ...	S. Dudley ...	Foods and sanitary survey.
1 September, 1909	Lowood ...	W. G. Wilson ...	<i>Re</i> sanitary depôt.
20 November, 1909	Middle Ridge ...	J. Simpson (Chief) ...	<i>Re</i> drainage nuisance.
16 November, 1909	Maryborough ...	A. J. Lewis ...	Sanitary survey.
16 November, 1909	Maryborough ...	W. G. Wilson ...	Food inspection.
17 December, 1909	Maryborough ...	F. Daniel ...	Bakers.
17 December, 1909	Maryborough ...	A. J. Lewis ...	Bakers.
15 April, 1910 ...	Maryborough ...	A. J. Lewis ...	Sanitary surveying.
9 April, 1910 ...	Marmor ...	A. J. Lewis ...	Sanitary surveying.
15 December, 1909	Marmor ...	A. J. Lewis ...	Sanitary surveying.
21 April, 1910 ...	Mount Morgan ...	W. G. Wilson ...	Sanitary surveying.
14 October, 1909 ...	North Rockhampton	W. G. Wilson ...	Sanitary surveying.
15 February, 1910	Nambour ...	A. J. Lewis ...	Sanitary surveying.
17 February, 1910	Nambour ...	A. J. Lewis ...	For water samples.
29 October, 1909 ...	North Rockhampton	J. Simpson (Chief) ...	<i>Re</i> Frenchman's Creek.
11 April, 1910 ...	Oakey ...	S. Dudley ...	Sanitary survey.
15 February, 1910	Palmwoods ...	A. J. Lewis ...	Sanitary survey.
14 March, 1910 ...	Pittsworth ...	S. Dudley ...	Sanitary survey.
17 November, 1909	Pialba ...	W. G. Wilson ...	Sanitary system.
13 October, 1909 ...	Rockhampton	A. J. Lewis ...	Foods.
13 October, 1909 ...	Rockhampton	W. G. Wilson ...	Foods.
2 April, 1910 ...	Rockhampton	A. J. Lewis ...	Sanitary survey.
24 July, 1909 ...	Roadvale ...	A. J. Lewis ...	Bread weighing.
24 July, 1909 ...	Roadvale ...	F. Daniel ...	Bread weighing.
19 April, 1910 ...	Springsure ...	W. G. Wilson ...	Sanitary survey.
5 January, 1910	Southport ...	W. G. Wilson ...	Sanitary system.
8 January, 1910	Southport ...	W. G. Wilson ...	Sanitary system.
29 July, 1909 ...	Southport ...	F. Daniel ...	Foods and prosecutions.
24 August, 1909 ...	Southport ...	A. J. Lewis ...	Foods.
27 April, 1910 ...	Struck Oil ...	W. G. Wilson ...	Liquor.
25 April, 1910 ...	Stanthorpe ...	S. Dudley ...	Sanitary survey.
7 March, 1910 ...	Toowoomba ...	S. Dudley ...	Typhoid fever.
20 January, 1910	Toowoomba ...	J. Simpson (Chief) ...	<i>Re</i> extension of sanitary area with C.P.H.
17 December, 1909	Tiaro ...	A. J. Lewis ...	Foods.
17 December, 1909	Tiaro ...	F. Daniel ...	Foods.
14 March, 1910 ...	Townsville ...	W. G. Wilson ...	General sanitary survey.
29 March, 1910 ...	Winton ...	W. G. Wilson ...	General sanitary survey.
12 January, 1910	Wondai ...	A. J. Lewis ...	<i>Re</i> typhoid fever and stores.
12 January, 1910	Wondai ...	F. Daniel ...	<i>Re</i> typhoid fever and stores.
27 April, 1910 ...	Warwick ...	S. Dudley ...	Sanitary survey.
23 April, 1910 ...	Wallangarra	S. Dudley ...	Sanitary survey.

APPENDIX F.

TOTAL NUMBER OF RATS AND MICE CAUGHT OR COLLECTED AND EXAMINED IN QUEENSLAND FROM 1ST JULY, 1909, TO 30TH JUNE, 1910.

—	—	DESTROYED.			EXAMINED.			INFECTED.		
		Rats.	Mice.	Total.	Rats.	Mice.	Total.	Rats.	Mice.	Total.
Brisbane	26,377	3,498	29,875	21,489	3,284	||24,773	...	...	...	...
† Ipswich	1,524	8	1,532	333	...	||333	...	...	...	...
* Maryborough	2,528	615	3,143	2,392	615	§3,007	...	...	...	...
Bundaberg	4,955	274	5,229	1,132	48	||1,180	...	...	...	...
Gladstone	248	597	845	14	2	§16	...	...	...	...
Rockhampton	3,331	458	3,789	3,149	458	§3,607	...	...	...	...
Mackay	2,805	644	3,449	...	...	...	†5	...	...	5
Townsville	5,353	283	5,636	2,580	156	§2,736	...	...	...	...
Cairns	5,017	114	5,131	271	7	§278	...	...	...	...
Totals	52,138	6,491	58,629	31,360	4,570	35,930	5	...	...	5

* One rat destroyer employed by Local Authority, one by Department.

† Operations to 29th January, 1910, only, carried out by Local Authority.

‡ July, August, and September, 1909. Results obtained from smear from spleen blood of which 1,358 were examined during year by Government Bacteriologist.

|| Carcasses examined at Bacteriological Institute.

† Carcasses examined locally.

APPENDIX G.

NUMBER OF RATS AND MICE CAUGHT OR COLLECTED AND EXAMINED, BRISBANE METROPOLITAN AREA,
1ST JULY, 1909, TO 30TH JUNE, 1910.

Month.	DESTROYED.			SUBMITTED FOR EXAMINATION.			SPECIES.		
	Rats.	Mice.	Total.	Rats.	Mice.	Total.	*M.D.	*M.R.	*M.A.R.
July ...	2,109	311	2,420	1,738	306	2,044	1,117	160	456 also 5 water rats
August ...	1,685	385	2,070	1,393	358	1,751	683	473	236 „ 1 „ „
September ...	1,931	391	2,322	1,618	356	1,974	1,029	179	410 „ 1 „ „
October ...	2,316	305	2,621	1,862	276	2,138	1,083	258	520 „ 1 „ „
November ...	2,755	264	3,019	2,151	264	2,415	1,272	339	540
December ...	2,563	221	2,784	2,022	196	2,218	1,229	284	507 „ 2 „ „
January ...	2,161	209	2,370	1,738	192	1,930	1,110	179	449
February ...	2,193	219	2,412	1,727	219	1,946	1,033	283	411
March ...	2,394	252	2,646	1,882	223	2,105	1,176	186	520
April ...	2,024	303	2,327	1,857	292	2,149	1,141	260	456
May ...	1,971	307	2,278	1,631	287	1,918	1,058	222	351
June ...	2,275	331	2,606	1,870	315	2,185	1,144	214	511 also 1 water rat
Grand Total ...	26,377	3,498	29,875	21,489	3,284	24,773	13,075	3,037	5,367

* *Mus decumanus*, *Mus rattus*, and *Mus alexandrinus rufus*, respectively.

Date on which last infected rat from area was examined—September 15th, 1908.

Number of poisoned baits laid for year—315,000.

Number of complaints of rat-infestation receiving attention—50.

Number of statutory notices served in connection with work—171.

Between July 1st, 1909 and May 14th, 1910, 2,400 Danysz virus baits were laid, each week, about the wharves. The virus was then discontinued owing to its inefficiency on testing.

APPENDIX H.

PROSECUTIONS FOR MILK ADULTERATION, FROM 1ST JULY, 1909, TO 30TH JUNE, 1910.

Place.	Added Water.	Result.	Total Fine and Costs Allowed.
1. Brisbane ...	9.42 per cent.	Fined £ 4 s. 0	£ 6 16 4
2. Ditto ...	8.0 „	„ 4 4 0	6 16 4
3. Ditto ...	9.42 „	„ 10 0 0	12 5 6
4. Ditto ...	4.7 „	„ 3 3 0	5 15 4
5. Ditto ...	7.3 „	„ 3 3 0	5 15 4
6. Ditto ...	5.8 „	„ 3 3 0	5 8 6
7. Ditto ...	8.6 „	„ 3 3 0	5 15 4
8. South Brisbane ...	4.7 „	„ 4 0 0	6 5 6
9. Ditto ...	31.8 „	„ 5 0 0	7 12 4
10. Ditto ...	4.0 „	„ 5 0 0	7 12 4
11. Brisbane ...	15.3 „	„ 10 0 0	12 19 2
12. Ditto ...	3.3 „	„ 2 0 0	4 12 4
13. Gympie ...	5.9 „	„ 3 0 0	5 4 6
14. Southport ...	18.24 „	„ 0 5 0	2 12 4
15. Ditto ...	26.83 „	Dismissed.	
Totals ...	...	Fines, £60 5s. 0d.	Fines and costs, £96 11s. 2d.

79 samples were taken.

15 milk vendors were prosecuted.

14 milk vendors were convicted and fined.

1 case was dismissed on a technical point.

APPENDIX I.

PROSECUTIONS FOR SPITTING ON FOOTPATHS, 1909-10.

(*Regulation of 16th March, 1910.*)

No.	Place.	Result.	Total Fines and Costs Allowed.
1	Brisbane	Fined £ 0 5 0	£ 0 18 6
2	Ditto	„ 0 5 0	0 18 6
3	Ditto	„ 0 5 6	0 9 0
4	Ditto	„ 0 16 6	1 0 0
5	Ditto	„ 0 16 6	1 0 0

Undertaken by Police Department.

APPENDIX J.

PROSECUTIONS FOR LIGHT-WEIGHT BREAD, 1ST JULY, 1909, TO 30TH JUNE, 1910.

Place.							Total Shortage.	Result.			Total Fine and Costs Allowed.			
								£	s.	d.	£	s.	d.	
1. Boonah	15 oz.	Fined	2	0	0	4	4	6
2. Harrisville	68 "	"	2	0	0	4	4	6
3. Boonah	34½ "	"	2	0	0	4	4	6
4. South Brisbane	23½ "	"	3	0	0	5	12	4
5. Ditto	...	...	...	...	...	...	29 "	Dismissed; appeal also dismissed.						
6. Brisbane	41 "	Fined	2	1	0	4	13	4
7. Ditto	21½ "	"	3	0	0	5	12	4
8. Southport	45 "	"	1	10	0	3	14	6
9. Ditto	22 "	"	0	15	0	4	2	4
10. Beenleigh	44½ "	"	4	8	0	9	11	7
11. Ditto	38 "	"	3	16	0	8	19	7
12. Zillmere	47 "	"	3	0	0	5	12	4
13. Bundaberg	37½ "	"	3	15	0	6	11	10
14. Ditto	51½ "	"	5	3	0	7	19	10
15. Ditto	63 "	"	5	10	3	8	7	1
16. Brisbane	83 "	"	2	1	6	2	5	0
17. Ditto	28½ "	"	0	14	3	1	4	7
18. Ditto	16½ "	"	1	0	0	1	10	4
19. Ditto	62 "	"	3	2	0	5	7	6
20. Cleveland	40 "	"	1	0	0	1	13	6
Totals	Fined	51	6	0	102	14	0

NOTE.—53 bakers' premises were visited. In 19 cases conviction and fine resulted for short-weight bread; 1 case was dismissed, and appeal was unsuccessful. In three other cases conviction and fine resulted for failure to carry scales on the cart (section now suspended).

APPENDIX K.

DISTRIBUTION OF CASES OF INFECTIOUS DISEASES NOTIFIED FROM THE BRISBANE METROPOLITAN AREA, 1ST JULY, 1909, TO 30TH JUNE, 1910.

Local Authorities.		Typhoid.	Scarlet Fever.	Puerperal Fever.	Diphtheria.	Erysipelas.	Phthisis.	Total.	Phthisis Deaths.
Brisbane	...	65	9	6	53	15	78	226	35
South Brisbane	...	64	6	2	42	8	5	127	53
Ithaca	...	22	2	2	24	7	36	93	6
Windsor	...	14	1	2	21	2	6	46	4
Taringa	...	2	...	...	2	...	3	7	1
Enoggera	...	...	...	...	...	...	5	5	3
Sandgate	...	1	1	...	9	...	1	12	1
Balmoral	...	1	...	...	2	...	3	11	...
Belmont	...	6	...	...	1	...	...	1	...
Wynnum	...	...	...	...	3	...	2	5	...
Toombul	...	3	...	...	8	1	8	20	1
Toowong	...	5	1	...	10	...	10	26	1
Yeerongpilly	...	...	...	...	1	...	1	2	...
Kedron	...	3	...	...	1	1	3	8	3
Indooroopilly	...	...	...	...	2	...	...	2	1
Coorparoo	...	...	...	...	7	...	2	9	...
Stephens	...	2	...	...	7	1	7	17	1
Sherwood	...	1	...	...	1	...	3	5	...
Hamilton	...	7	...	1	4	...	1	13	1
Tingalpa	...	1	...	...	1	...	...	2	...
Grand Total	...	196	20	14	198	35	174	637	111

Four cases of infantile paralysis were also notified, 3 from South Brisbane and 1 from Tingalpa.

DISINFECTION.

Six hundred and ten premises were disinfected by the Department on behalf of Local Authorities in the Metropolitan Area during the year.

APPENDIX L.

NOTIFICATION OF INFECTIOUS DISEASES RECEIVED FROM MEDICAL PRACTITIONERS WITHIN THE STATE, IN RESPECT OF STATUTORY NOTIFIABLE DISEASES AND DEATHS FROM PHthisis, 1ST JULY, 1909, TO 30TH JUNE, 1910.

* Notifications Received.

Notifiable Disease.											* Notifications Received.
Continued Fever	...	...	...	...	...	...	...	...	...	...	1
Diphtheria	...	...	...	...	...	...	...	...	...	...	552
Erysipelas	...	...	...	...	...	...	...	...	...	...	70
Membranous Croup	...	...	...	...	...	...	...	...	...	...	6
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	11
Phthisis	...	...	...	...	...	...	...	...	...	...	171
Phthisis Deaths	...	...	...	...	...	...	...	...	...	...	100
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	33
Typhoid Fever	...	...	...	...	...	...	...	...	...	...	760
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	10
Ankylostomiasis	...	...	...	...	...	...	...	...	...	...	1
TOTAL ...											1,715

* Hospital cases not included.

APPENDIX M.

TOTAL FOOD STUFFS DESTROYED AS UNFIT FOR HUMAN CONSUMPTION.
1ST JULY, 1909, TO 30TH JUNE, 1910.

Article.	Quantity.	—				Article.	Quantity.	—			
		Ton	cwt.	qr.	lb.			Ton	cwt.	qr.	lb.
Bananas ...	383 crates	114	18	0	0	Brought forward	...	132	8	2	16
,,	16 cases	0	16	0	0	Oatmeal ...	1 packet	0	0	1	4
Ling Fish ...	101 boxes	4	4	3	14	Baking Powder ...	16 tins	0	0	0	8
Cod Fish ...	276 "	4	18	2	8	Potatoes ...	36 bags	4	10	0	0
Condensed Milk ...	14,005 tins	6	5	0	5	Onions ...	7 cases	0	4	1	14
Smoked Fish ...	42 dozen	0	2	2	0	Rabbits ...	30 crates	1	10	0	0
Jam ...	621 tins	0	9	2	25	Pepper ...	32 tins	0	0	0	16
Fruit ...	187 "	0	3	1	10	Vinegar ...	3 bottles	0	0	0	6
Peas ...	121 "	0	1	0	9	Limejuice ...	1 bottle	0	0	0	2
Sardines ...	965 "	0	3	1	21	Cabbages ...	...	0	10	1	0
Fish ...	487 "	0	4	1	11	Dried Apples ...	...	0	0	0	21
Meat ...	30 "	0	0	1	2	Dried Apricots ...	...	0	0	0	26
Pickles ...	37 bottles	0	0	1	9	Peaches ...	65 cases	1	3	0	24
Sauce ...	11 "	0	0	0	5	Nectarines ...	9 "	0	3	0	24
Coffee ...	29 tins	0	0	1	1	Oranges ...	4 "	0	1	1	20
Puddings ...	34 "	0	0	1	6	Apples ...	22 "	0	11	0	0
Infant's Food ...	7 "	0	0	0	7	Tomatoes ...	36 "	0	6	1	0
Homali ...	29 packets	0	0	0	15	Mangoes ...	3 "	0	1	2	0
Meat Paste ...	42 tins	0	0	0	10	Plums ...	28 "	0	5	0	0
Marrow ...	4 "	0	0	0	4	Lemons ...	8 "	0	4	0	0
Lollies ...	4 lbs.	0	0	0	4	Mandarins ...	24 "	0	12	0	0
Vegetables ...	2 tins	0	0	0	4	Pears ...	144 "	3	12	0	0
Figs ...	2 boxes	0	0	0	14	Grapes ...	12 "	0	5	1	12
Carried forward	...	132	8	2	16	Pineapples ...	300 "	0	5	1	12
Total ...											146
											14
											2
											9

Price 7d.]

By Authority: ANTHONY JAMES CUMMING, Government Printer, William street, Brisbane.